

the entire embedded MMS protocol). Last come the WCMP fields in the MMS protocol, which are referred to here as MMSP. These first of all include a designation MMSI (also called an MMS identifier), which indicates that an MMS protocol is implemented with the help of this WCMP field. The subsequent identifier MMSNI indicates the type of this MMS protocol. It therefore specifies what type of MMS message it is, and consequently corresponds to the content of parameter UHI in the first specific embodiment. Parameter MMSC indicates, in turn, the user ID and profile ID in the example of MMS session establishment.

Similarly to the first exemplary embodiment, a unique indicator must be defined for each type of message. A mapping table could look like this:

TABLE 2

Exemplary Assignment of MMSNI Codes	
Type of Dedicated MMS Message	MMSNI-Code
MMS user message	0
MMS notification	1
MMS session establishment	2
MMS receipt (of establishment)	3
MME explicit notification-query	4
MMS ACK/NACK of submission (1)	5
MMS ACK/NACK of submission (2)	6
MMS ACK/NACK of delivery	7
MMS pull-push	8

FIG. 3 shows the structure of an SMS short message of the second type B in GSM, in a third specific embodiment of the method according to the present invention. While the user data header was used in the two aforementioned embodiments to produce MMS notifications, it is also conceivable to use the TP-PID for identifying such a notification. In this case, the service center participates in the protocol while, in the two aforementioned specific embodiments, it only forwards the data in a transparent manner.

In the present example, it is assumed that the MMS relay executes a special MMS protocol with the SMSC, i.e. notifications for the user are transmitted from the MMS relay to the SMSC in a special MMS format, in order to transmit these messages to the user or transmit notifications from the user to the MMS relay, via the SMSC. In the SMSC, these notifications are then converted from SMS into the MMS format (and vice versa), in a manner similar to how SMS can be converted to fax today. To this end, parameter TP-PID in SMS short message SM' is set to a specific value MMSI for the MMS service. This specification establishes for the transmitter and receiver, that further information specific to MMS protocol follows in the user data. The appearance of these may be as follows.

An additional MMS message identifier MMNSI' indicates the type of notification, e.g. an MMS session establishment which is sent from the user to the MMS relay. For example, these identifiers MMNSI' may again be constructed like the parameters MMSNI in Table 2, and may take up 8 bits for display. A field MMSL, which is, e.g. 8 bits wide, defines the length of the following MMS information items. MMSC. These are independent of the type of notification. In the case of the MMS session establishment, the user ID and the ID of the desired profile may be communicated in MMSC, as mentioned.

Depending on whether telematic interworking or message handling is desired, the TP-PID may be present in the form <001xxxxx> (e.g. <00110011>) or <01 xxxxxx> (e.g. <01001000>).

Although the present invention is described above, based on preferred exemplary embodiments, the method is not limited to them, but can be modified in a plurality of ways. In particular, the present invention is not limited to the mentioned telecommunications networks and the services available in them. In addition, the structure of the short messages may be varied. Other criteria, such as network utilization, etc. may also be used to determine which messages of the first message service are to be sent by the second message service.

What is claimed is:

1. A method for transmitting multimedia messages of a multimedia message service using short messages of a short message service in a telecommunications network, the method comprising:

embedding a multimedia message of a multimedia message service within a data portion of a short message of a short message service, the data portion following a header portion of the short message;

including in said short message a first identifier indicating that said multimedia message is present in said data portion;

including in the data portion of the short message a second identifier indicating a type of said multimedia message; and

transmitting the short message to a receiver.

2. The method of claim 1, wherein the first identifier is included in the header portion of the short message.

3. The method of claim 1, wherein the first identifier is included in the data portion of the short message.

4. The method of claim 1, wherein the first identifier and the second identifier are included in a user data header of the data portion.

5. The method of claim 1, wherein the first identifier, the second identifier and the multimedia message are included in a user data header of the data portion.

6. The method of claim 1, wherein the multimedia message service is MMS.

7. The method of claim 1, wherein the multimedia message is selected from a predefined group of MMS messages.

8. The method of claim 7, wherein the predefined group of MMS messages comprises MMS notification messages, MMS session establishment messages, MMS session establishment receipt messages, MMS notification-query messages, MMS acknowledgement messages, and MMS pull-push messages.

9. The method of claim 1, wherein the short message service is SMS.

10. The method of claim 1, wherein the receiver is at least a portion of: a cellular phone, a short message service center, or an MMS relay.

11. A transmitter capable of transmitting multimedia messages of a multimedia message service using short messages of a short message service in a telecommunications network, wherein the transmitter is configured to:

embed a multimedia message of a multimedia message service within a data portion of a short message of a short message service, the data portion following a header portion of the short message;

include in said short message a first identifier indicating that said multimedia message is present in said data portion;

include in the data portion of the short message a second identifier indicating a type of said multimedia message; and

transmit the short message to a receiver.